

WHAT IS CLAIMED IS:

1. A personal air purifier for insertion in a user's nose comprising:
two semi-cylinders of porous foam filter media each having a base
with a flat surface and a spherical shape on an end distal from the flat surface; and,
5 a thin flexible band integrally molded with the semi-cylinders and
extending between the bases;
the semi-cylinders sized such that upon insertion in a nostril the distal,
spherical shaped end of each semi-cylinder is located inside the nasal vestibule and
the base of each semi-cylinder is tucked in within the nostril just behind the ala, the
10 flexible band extending over the end of the septum of the nose preventing
overinsertion of one or both of the semi-cylinders and serving as a handle to remove
the air purifier from the nose.
2. A personal air purifier as defined in claim 1 wherein the semi-cylinders are
tapered from the base toward the distal end.
- 15 3. A personal air purifier as defined in claim 1 wherein the semi-cylinders have a
plurality of circumferentially spaced flattened surfaces intermediate the base and
distal end.
4. A personal air purifier as defined in claim 1 wherein the foam filter media is
reticulated foam.
- 20 5. A personal air purifier as defined in claim 1 wherein the foam filter media is a
dielectric.
6. A personal air purifier as defined in claim 4 wherein the reticulated foam is
selected from polyurethane or silicone chemical family and of the polyether or
polyester category.
- 25 7. A personal air purifier as defined in claim 4 wherein the reticulated foam has
about 40 to about 130 pores per inch.
8. A personal air purifier for insertion in a user's nose comprising:
two semi-cylinders of foam filter media each having a base with a flat
surface and a spherical shape on an end distal from the flat surface, the semi-cylinders

tapered from the base toward the distal end, and have a plurality of circumferentially spaced flattened surfaces intermediate the base and distal end; and,

a thin flexible band integrally molded with the semi-cylinders and extending between the bases;

- 5 the semi-cylinders sized such that upon insertion in a nostril the distal, spherical shaped end of each semi-cylinder is located just inside and within the nasal vestibule and the base of each semi-cylinder is tucked in within the nostril just behind the ala, the flexible band extending over the end of the septum of the nose preventing overinsertion of one or both of the semi-cylinders and serving as a handle to remove
10 the air purifier from the nose.

9. A personal air purifier as defined in claim 8 wherein the foam filter media is reticulated foam.

10. A personal air purifier as defined in claim 8 wherein the foam filter media is a dielectric.

- 15 11. A personal air purifier for insertion in a user's nose comprising:

two semi-cylinders of dielectric reticulated foam filter media each having a base with a flat surface and a spherical shape on an end distal from the flat surface; and,

- 20 a thin flexible band integrally molded with the semi-cylinders and extending between the bases;

- 25 the semi-cylinders sized such that upon insertion in a nostril the distal, spherical shaped end of each semi-cylinder is located just inside and within the nasal vestibule and the base of each semi-cylinder is tucked in within the nostril just behind the ala, the flexible band extending over the end of the septum of the nose preventing overinsertion of one or both of the semi-cylinders and serving as a handle to remove the air purifier from the nose.

12. A personal air purifier as defined in claim 11 wherein the semi-cylinders are tapered from the base toward the distal end.

13. A personal air purifier as defined in claim 11 wherein the semi-cylinders have a plurality of circumferentially spaced flattened surfaces intermediate the base and distal end.
14. A personal air purifier as defined in claim 11 wherein the reticulated foam is
5 selected from polyurethane or silicone chemical family and of the polyether or polyester category.
15. A personal air purifier as defined in claim 11 wherein the reticulated foam has about 40 to about 130 pores per inch.
16. A method for producing a personal air purifier comprising the steps of:
10 selecting reticulated foam in sheet form;
 slitting the foam to a predetermined thickness;
 sawing the foam to a predetermined dimension ;
 die-cutting the foam to produce a preform suitable for a molding process;
15 molding the preform utilizing heat and pressure to a net shape having two semi-cylinders of dielectric reticulated foam filter media each having a base with a flat surface and a spherical shape on an end distal from the flat surface; and,
 a thin flexible band integrally molded with the semi-cylinders and extending between the bases.
- 20 17. A method for producing a personal air purifier as defined in claim 17 wherein the step of selecting reticulated foam comprises selecting foam from the polyurethane or silicone chemical family and of the polyether or polyester category.
18. A method for producing a personal air purifier as defined in claim 17 wherein the step of selecting reticulated foam further comprises selecting foam having about
25 40 to about 130 pores per inch.